

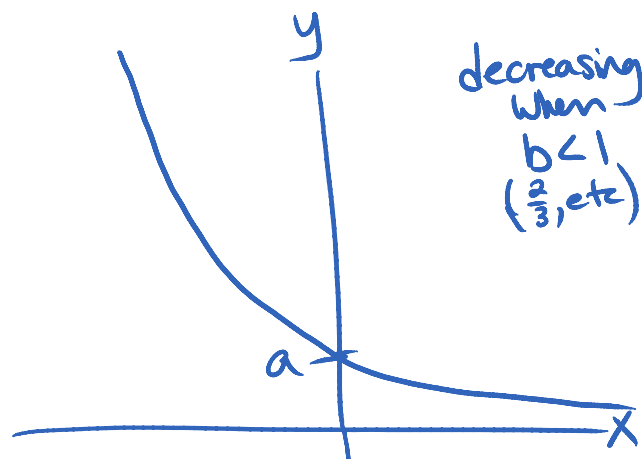
7.1 & 7.2 Exponential Functions

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10:27 AM

Exponential function:

$$\boxed{y = a(b)^x} \rightarrow \begin{array}{l} a > 0 \text{ (for us)} \\ b > 0, b \neq 1 \end{array}$$

Characteristics



of x-intercepts = 0

value of y-intercept = a (when $x = 0 \rightarrow y = a(b)^0 = a(1) = a$)

end behaviour QII to QI

Domain: $x \in \mathbb{R}$

Range: $y > 0, y \in \mathbb{R}$

$$e = 2.718 \dots$$

irrational number

$$\log_5(5) = 1$$

$$\log 10 = 1 = \log_{10} 10$$

$$\ln(e) = 1 = \log_e(e)$$